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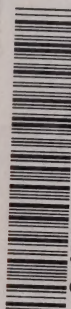
SMASHED

THE MAGAZINE ON DRINKING AND DRIVING

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**TIME TO
BAC OFF**

**THE
EMOTIONAL
AFTERMATH**

**TAKING
CHARGE**

**CRIME AND
PUNISHMENT**

**TRIPLE
THREAT
TROUBLE**



Canada

**THE
LIFE
OF THE
PARTY**



**ISN'T
ANY MORE**

Text prepared
in consultation with
the Traffic Injury
Research Foundation
of Canada.

Road Safety and
Motor Vehicle
Regulation
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Ottawa, Ontario
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SMASHED AGAIN

Since SMASHED was first published in 1979, a wave of concern about impaired driving has swept the country.

Motor vehicle accidents are a major health and safety problem in our country today. In the last decade, 51 300 people died in road crashes in Canada; another 2 342 300 were injured — many of them permanently disabled. In fact, road crashes are now the leading cause of death to people under the age of 45 and a major cause of injury. The cost to our country in terms of medical bills, car repairs and loss of productivity is about five billion dollars annually.

Between 80 and 90 per cent of all traffic crashes result from *human* errors and conditions. The most common condition is impairment due to alcohol and other drugs. Impaired driving increases the chances of error and often leads to serious collisions. No one knows how many innocent people are injured or killed in crashes involving impaired driving. We do know that 40 to 50 per cent of all drivers killed on Canadian roads were impaired at the time of their

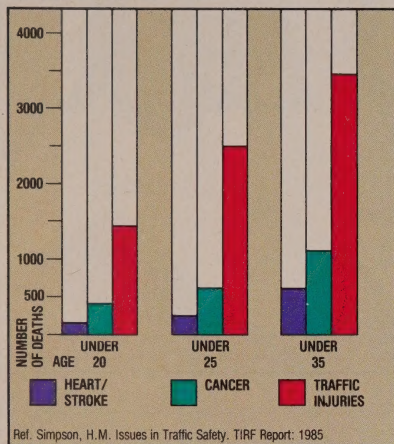
deaths. But no statistics, however large, can convey the senselessness, the waste of life caused by the criminal behaviour of impaired drivers.

This magazine provides current information on impaired driving. Its purpose is to increase your awareness and understanding of the problem; to inform you about the consequences of driving after drinking or taking a drug; to help you understand and obey impaired driving laws; and to encourage you to take personal action and join with others to prevent impaired driving.

Since SMASHED was first published in 1979, a wave of concern about impaired driving has swept the country. In recent years, victims of crashes caused by drunk drivers have spoken out and, along with others, they have fostered a new social awareness. As one result, new, tougher laws have been enacted. Another difference is the growing recognition that each of us can play a part in preventing impaired driving.

This revised edition of SMASHED reflects changes since the magazine was first published and gives you the up-to-date facts you need to participate in solving the problem of impaired driving.

CAUSES OF DEATH BY AGE



A major change is Canada's new laws on impaired driving. There are new, more serious offences and very stiff penalties now in force. See page 31 for details.

We sometimes overlook the great suffering and personal loss impaired driving causes. To explore the human dimensions of this problem, see page 6.



Ministry
of
Transportation

Ontario

Some things don't change. For example, the more you drink, the greater the effects of alcohol. The greater the effects of alcohol, the higher your chances of crashing or being arrested for impaired driving. Learn about blood alcohol concentration (BAC) and how alcohol affects you, your ability to drive and your risk of crashing after drinking. This begins on page 9.

The first edition of SMASHED had a section called "Do-It-Yourself Drunk Tests." Most experts (and a lot of readers!) thought this section gave the wrong message. As a consequence the section has been removed from this edition. Basically, there are no simple tests to tell you whether you are safe to drive after drinking. (The safest way to go is to separate driving and drinking completely.)

Finally, we asked the question of what we as individuals can do to prevent impaired driving. We found many more answers than we could possibly print in SMASHED. To get some ideas on how you can participate, see page 37.

It seems so obvious now. It's up to each of us to prevent impaired driving. Together, we will.

The Publisher

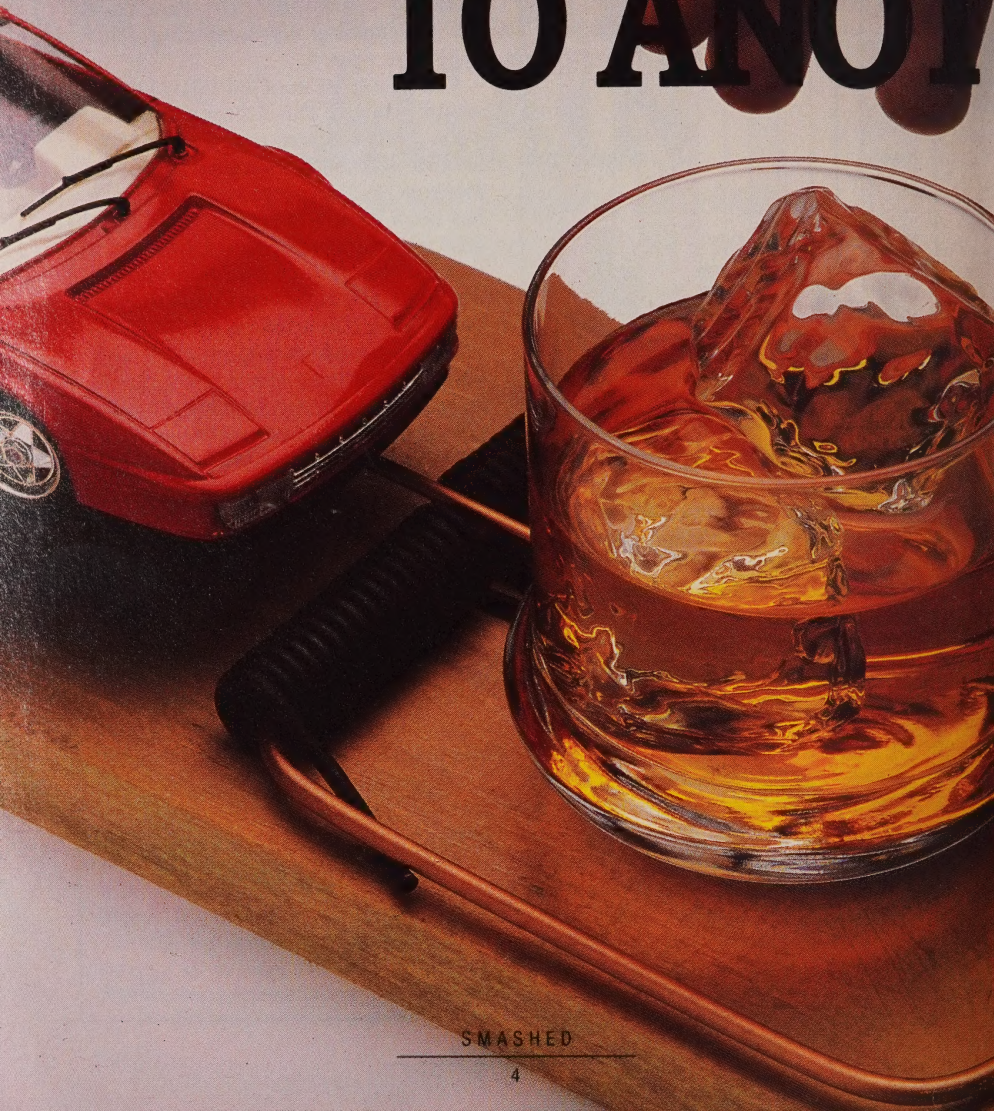


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ONE THING TO ANOTHER



SMASHED



LEADS HER

Long recognized as a serious social problem, alcohol-impaired driving has been a *criminal* offence in Canada for more than half a century. Today, public concern has led to new, tougher laws — and stricter enforcement of the law. Media campaigns make people aware of the dangers of driving after drinking, and treatment programs help offenders overcome drinking problems.

These and other efforts have begun to pay off, but alcohol-impaired driving still remains a frequent cause of death and injury in Canada. The problem persists because driving and drinking are important parts of many Canadians' lifestyle. More than 15 million licensed drivers in this country drive more than 180 billion kilometres each year. On average, adults consume about 12 drinks of alcohol each week. Far too often, these two activities — driving and drinking — are combined with no thought of potentially tragic consequences. As a result, every effort is needed to emphasize the statement made in our laws, that *alcohol-impaired driving is not only unacceptable, but also criminal.*

This sentiment has gained fresh meaning through the actions of people who have lost family and friends in accidents caused by impaired driving. Angry and grieving, many victims have joined together and demanded immediate responses from government and industry. Their efforts have helped fuel the intense concern now evident throughout Canada. This concern has inspired many possible solutions, including actions that each of us can take to prevent alcohol-impaired driving and the damage it does to people and property.

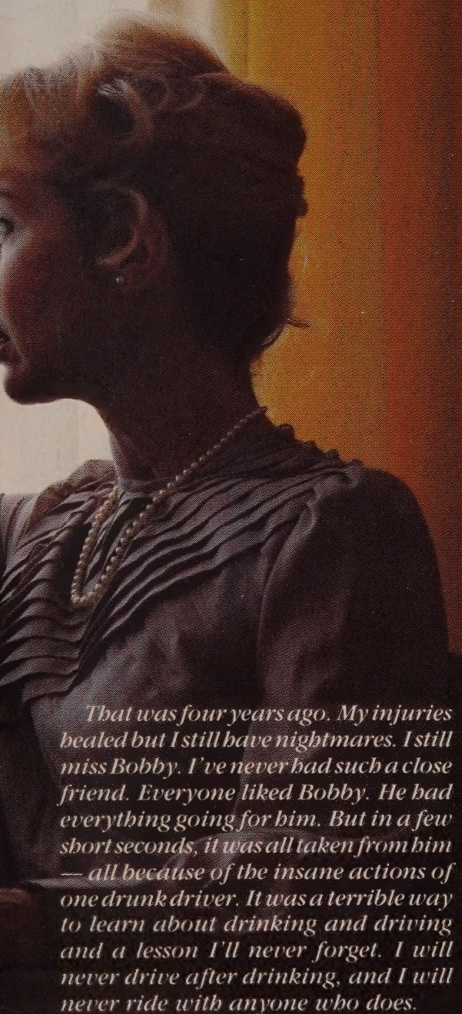
THE EMOTIONAL AFTERMATH

The damage done by impaired driving can last a lifetime.

Statistics on drinking and driving describe the size of the problem but they fail to convey its human dimensions. For victims of impaired driving, statistics simply mean more pain. Such feelings are best expressed by one who has experienced them directly, such as 17-year-old Jean, who lost a good friend because of a drunk driver.

Bobby and I were walking home Friday evening after the game. Our school had won and we were really happy. I

can't remember everything that happened now, but I'll never forget the lights of that car coming down the road. It came very fast and weaved across the road. I yelled "Get back!" at Bobby but we moved too late. The next thing I remember was my parents, staring down at me. My father was crying. Next the ambulance came. I had three broken ribs and a concussion. Later, the doctor said Bobby died instantly and didn't feel anything.



That was four years ago. My injuries healed but I still have nightmares. I still miss Bobby. I've never had such a close friend. Everyone liked Bobby. He had everything going for him. But in a few short seconds, it was all taken from him — all because of the insane actions of one drunk driver. It was a terrible way to learn about drinking and driving and a lesson I'll never forget. I will never drive after drinking, and I will never ride with anyone who does.

No one intends to kill or injure another person when they drive after drinking. But, it happens anyway — needlessly and inexcusably. And, no one wants to hurt *themselves* by driving after drinking either. But that also happens. Paul, now 24 years old, can tell you.

Have you ever been in jail? I have and I never want to go back. I always thought jail was for criminals and I sure never thought of myself as one. But impaired driving is a crime.

After the first time, I said it would never happen again. You think I would have learned. I went to court hoping I wouldn't see anyone I knew. I pleaded guilty and the judge gave me a \$300 fine and suspended my driver's licence for 90 days. When I got my licence back and I started to drive again, my car insurance tripled.

Then, only a few months later, it happened again. I stopped for a couple of drinks with some friends after work one evening. I thought I was OK to drive until I saw the flashing lights in my rear view mirror. The officer said I went through a stop sign and it started all over again. This time it was much worse. My blood alcohol level was 170 mg % — more than twice the legal limit. I was sentenced to 14 days in jail and my licence was suspended for a year. When I got out of jail, I had to make special arrangements to get to work. But I think the worst part was facing my family and friends.

I've had lots of time to think about drinking and driving and just what could have happened if someone else had been coming when I went through that stop sign. I've learned my lesson. I hope you never have to go through what I did or, even worse, kill somebody before you stop drinking and driving.



TIME TO BAC OFF

Only time will lower the amount
of alcohol in your blood. The more you drink,
the longer it takes.

The term "Blood Alcohol Concentration" or BAC refers to the amount of alcohol in a person's blood. BAC can be determined by measuring the weight of alcohol in a fixed volume of blood. In Canada, BAC is usually expressed as the number of milligrams of alcohol (weight) in 100 millilitres of blood (volume). Canadian law specifies that the maximum allowable amount of alcohol in the bloodstream of a driver is 80 milligrams in 100 millilitres of blood — 80 mg%.

BAC can also be measured in a person's breath by using an instrument called a "Breathalyzer." Breath tests are just as accurate as blood tests for measuring BAC. This is because blood flows through the lungs, and alcohol molecules pass into air held in the lungs. When a person blows into the Breathalyzer, these alcohol molecules are

expelled with the air. Because the alcohol concentration in the blood is always about 2 100 times greater than in expired air, the Breathalyzer can automatically measure the concentration of alcohol in the blood.

BAC is important because it relates to *how much you drink; how strongly alcohol affects you; how much greater risk you face on the road; and how close you are to breaking the law.* The more you drink, the higher your BAC. The higher your BAC, the more physically and mentally impaired you become. The more impaired you are, the higher your risk of a crash. If you drive impaired, however, you break the law, no matter what your BAC.

It is no accident that the legal BAC limit is 80 mg%. At this BAC, one's ability to drive is impaired — many persons are *very* impaired. More importantly,

at BACs higher than 80 mg%, your chances of being involved in a serious road accident are much greater than when you have not consumed alcohol.

Alcohol in the Body

Many of us enjoy having a drink. We sometimes consume alcohol as part of a meal, a social occasion, or simply to relax. However acceptable this is, we should keep in mind that alcohol is a drug to be used with understanding and care, and only under suitable circumstances. Knowing alcohol's effects is just as important as reading the instructions and warnings on a bottle of pills. It is basic preventive medicine to know how your body handles alcohol. This will require some study.

Each serving contains the same amount of alcohol.

Alcohol intake. When you have a drink, the alcohol is absorbed directly into your bloodstream through the stomach and small intestine. The more you drink, the more alcohol will be absorbed, and your BAC will continue to rise. Given enough time — from 30 to 90 minutes or longer — alcohol goes evenly throughout your body.

Alcohol elimination. Once alcohol has entered your bloodstream, it doesn't simply pass through you. Like most things we eat or drink, the alcohol must be broken down and eliminated. *It takes much more time to eliminate alcohol from your body than it does to drink it.* Most alcohol is destroyed by a process called oxidation, which breaks al-

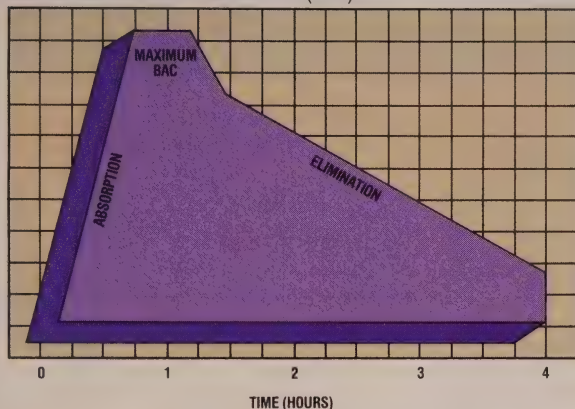
ONE STANDARD DRINK OF THESE BEVERAGES CONTAINS THE SAME AMOUNT OF ALCOHOL



Spirits, wine and beer available in Canada differ in their concentration of alcohol. The illustration shows standard servings for various types of beverages.

cohol down into carbon dioxide and water. More than 90 per cent of the alcohol is oxidized in the liver. The rest is eliminated, unchanged, through the

BLOOD ALCOHOL CONCENTRATION (BAC)



THE IDEAL BLOOD ALCOHOL CURVE

A blood alcohol curve may be plotted which charts the course of alcohol in the body against a time factor. Typically, absorption and diffusion take place quite rapidly, leading to a peak blood alcohol reading which then declines steadily but slowly over a more prolonged period.

Adapted from Widmark 1932

lungs and kidneys. Because the liver's capacity to break down alcohol is limited, it takes time to dispose of the alcohol you have consumed — roughly one hour for a standard serving of alcohol, or about 15 mg% every hour.

BAC curve. The absorption and elimination of alcohol can best be illustrated by a graph. As you drink, alcohol is absorbed into your bloodstream and your blood alcohol concentration (BAC) rises quickly to a peak. If you stop drinking or consume only one drink per hour, your BAC then levels off and can remain the same for as long as an hour or two because alcohol is entering your bloodstream at the same rate as it is eliminated. If you stop drinking at this point, your blood alcohol concentration will then decline steadily by approximately 15 mg% per hour. *It is important to remember that your BAC can rise much more quickly than it falls.*

For example, if you have a BAC of 90 mg%, it will take you about *six hours* to return to a BAC of 0 mg%. You can't do anything to speed up the elimination

of alcohol. Because only a very small amount of alcohol is eliminated through tears, saliva and perspiration, you can't dance, jog, sing or cry away alcohol. Frequent urination doesn't help. Drinking black coffee or taking a cold shower will have no effect on your BAC. Nor is the rate of elimination affected by your weight or tolerance to alcohol. Remember, the experienced drinker takes just as long to eliminate alcohol as does the inexperienced drinker. *Only time can lower your BAC.*

Factors affecting BAC. A number of factors influence how fast alcohol is absorbed into your bloodstream. The slower the rate of absorption, the lower the BAC peak will be. So, if you sip your drink instead of gulping it, or if you have food in your stomach, your BAC peak will be lower.

Peak BAC also varies with body weight, because blood volumes differ according to body weight. Given the same amount of alcohol, the greater one's blood volume, the lower one's concentration of alcohol. Blood volume

BAC CHARTS

Estimated BAC in mg% by number of drinks in relation to body weight.

FEMALES

BODY WEIGHT*		NO. OF DRINKS									
KGS	LBS	1	2	3	4	5	6	7	8	9	10
45	100	50	101	152	203	253	304	355	406	456	507
57	125	40	80	120	162	202	244	282	324	364	404
68	150	34	68	101	135	169	203	237	271	304	338
79	175	29	58	87	117	146	175	204	233	262	292
91	200	26	50	76	101	126	152	177	203	227	253
102	225	22	45	68	91	113	136	159	182	204	227
114	250	20	41	61	82	101	122	142	162	182	202


MALES

BODY WEIGHT*		NO. OF DRINKS									
KGS	LBS	1	2	3	4	5	6	7	8	9	10
45	100	43	87	130	174	217	261	304	348	391	435
57	125	34	69	103	139	173	209	242	278	312	346
68	150	29	58	87	116	145	174	203	232	261	290
79	175	25	50	75	100	125	150	175	200	225	250
91	200	22	43	65	87	108	130	152	174	195	217
102	225	19	39	58	78	97	117	136	156	175	195
114	250	17	35	52	70	87	105	122	139	156	173

1 DRINK =

- ☐ 43 mL (1.5 oz.) of rum, rye, scotch, brandy, gin, vodka, etc.
- ☐ 341 mL (12 oz.) of normal strength beer
- ☐ 85 mL (3 oz.) of fortified wine
- ☐ 142 mL (5 oz.) of table wine

*Ideal body weight (see text for explanation)



HERE'S HOW TO USE THE CHARTS

- A** Select the appropriate chart (one is for women, the other for men).
- B** Find the body weight closest to yours in the left-hand column.
- C** Move across the row and locate your estimated total BAC under the column corresponding to the number of drinks you consumed or plan to consume.
- D** Determine the number of hours it takes for you to consume this many drinks.
- E** For every hour, subtract 15 mg% from the total BAC estimated.

HOURS SINCE FIRST DRINK	1	2	3	4	5
SUB- TRACT FROM BAC	15	30	45	60	75

EXAMPLE

For example, let's calculate the BAC of a 68-kg (150-lb) man who has had four drinks in two hours. In the chart, go across the row labelled 68 kg until you reach the drink column 4. A BAC of 116 mg% is indicated. From this figure of 116, subtract 30 mg% for the two-hour elimination period. This gives us a BAC of 116 minus 30 (86 mg%). The estimated BAC for this 68-kg man is 86 mg%, higher than the legal limit of 80 mg%.

varies according to two basic factors: recommended ideal body weight based on height and sex, and the type of body tissue that makes up that weight. Larger persons generally have a greater volume of blood in which alcohol can be distributed. Hence, after drinking the same amount of alcohol, a person weighing 68 kg (150 lb) will have a higher peak BAC than a person of the same sex weighing 79 kg (175 lb). See charts on page 12.

Muscle tissue requires larger supplies of blood than fatty tissue. The more muscular or lean your body is, the greater your blood volume will be. A 68-kg (150-lb) person who has a lot of body fat will have a higher BAC than a lean 68-kg person of the same sex after drinking the same amount of alcohol.

Women tend to have a higher proportion of fatty tissue than men. Equal amounts of alcohol will, therefore, result in a higher BAC for a 60-kg (130-lb) woman than for a 60-kg man. This means that it normally takes *less* alcohol for a woman to reach the legal

BAC limit than a man. Women should not assume that they have a lower BAC than a man because they have had fewer drinks.

Estimating Your BAC

When we drink, we begin to lose our ability to recognize signs of intoxication. Most people can't judge how impaired they are after drinking. And most people can't accurately estimate their own BAC without the aid of a breath testing instrument. Therefore, *when you have any doubt about your level of impairment or your BAC, it's best not to drive.*

People often ask "How much can I drink and still be safe to drive?" Unfortunately, there is no hard and fast rule to follow. The charts on page 12 — one for men and one for women — allow you to **ESTIMATE** your BAC after consuming a certain number of drinks in a given period of time. These charts are based on *ideal conditions* and are intended to provide an indication of how the number of drinks you consume translates into BAC.

If you weigh *more* than your ideal weight, it may be because you have more fatty tissue than average. Remember that

blood volume is reduced with increases in the amount of fatty tissue. Consequently, you might actually reach a *higher* BAC than indicated in these charts and the impairing effects of alcohol will be greater.

Using the chart, you can get a rough estimate of the BAC you might reach after drinking. It will also give you an idea of how long it takes the alcohol to leave your body. The chart is meant only as a guide and should *not* be used as a means to determine your fitness to drive after drinking.

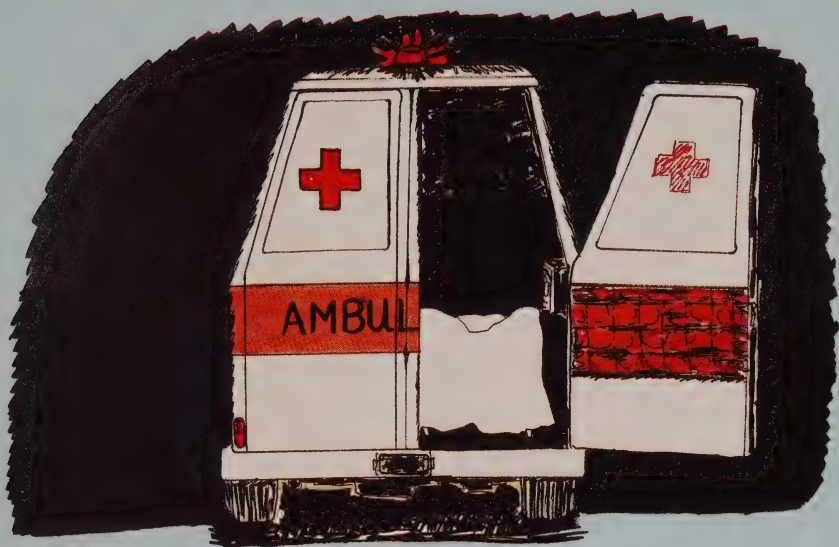
Remember, *there is no safe limit* for drinking before driving. Impairment can occur at levels below 80 mg%. You can reduce the risk of being involved in an accident, however, by drinking moderately. You are safest if you *completely* separate driving from drinking.

There is no safe limit
for drinking before driving.



SMASHED

GRADUATION PROVIDES MANY OPPORTUNITIES



DON'T CLOSE
THOSE DOORS
IN ONE NIGHT

SAFE GRADUATION

Artist: Roberta Hupman
Reproduced with permission of the Department of the Attorney General, Nova Scotia



TOO MUCH ALCOHOL

Hazardous to
health and safety.

How Alcohol Affects Behaviour

Alcohol affects everyone who drinks. The more alcohol consumed, the greater its effects on behaviour. The intensity of effects can differ greatly from person to person. Even people who always drink the same amount may feel the effects of alcohol more strongly sometimes. How you feel after drinking depends on your mood, your physical condition, what you are doing, and where you are. For example, if you are tired or are just recovering from a cold, alcohol's effects on you can be much greater. Drinking can increase feelings of anxiety, or lead to aggressive, hostile behaviour, or produce depression. Your reaction to alcohol will also depend on the social demands placed

upon you. A few drinks with friends at a party can have a greater effect than a few drinks with family at a formal dinner.

You can also become tolerant to the effects of alcohol. Many experienced drinkers learn to compensate for some obvious signs of alcohol consumption and can act almost normally after three or four drinks. But not even experienced drinkers can overcome the effects of alcohol on tasks demanding fine-tuned motor coordination or quick, accurate judgments, such as driving a motor vehicle.

Some people drink so much, so often, that they develop an actual physical tolerance to alcohol. As a result of prolonged regular drinking, some cells in

the brain can become less sensitive to the effects of alcohol. This means that progressively more alcohol may be needed to produce the mood-altering effects experienced in earlier stages of drinking.

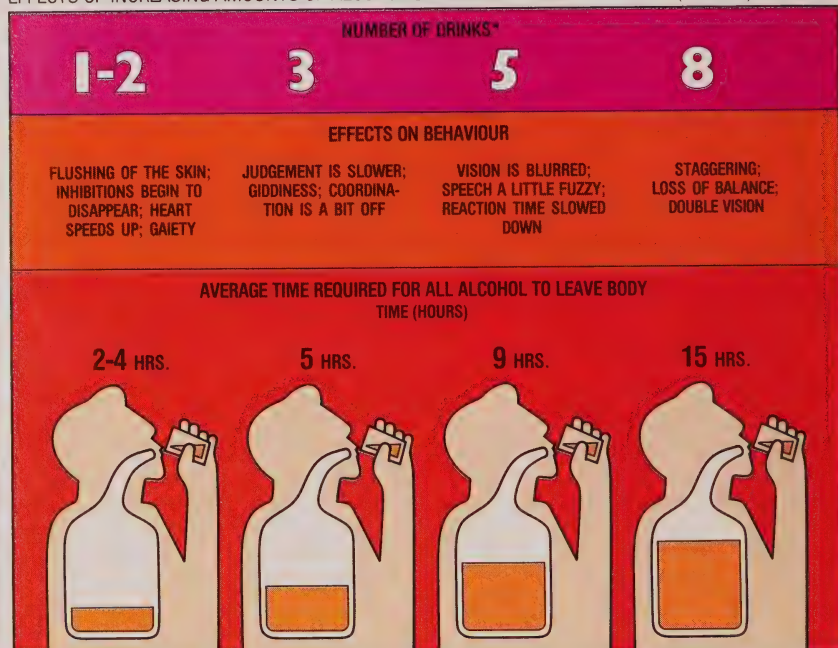
Although the effects of alcohol do vary from person to person and from time to time, there is a pattern of effects corresponding to different degrees of intoxication. The chart below lists predictable effects of alcohol on the feelings and behaviour of an average male drinker weighing 73 kg (about 160 lbs). The effects of alcohol roughly relate to the number of drinks consumed in an hour or so. Again, the faster you drink,

the faster you will experience the impairing effects of alcohol.

We first notice the effects of alcohol on complicated tasks demanding quick choices and accurate responses. After a few drinks, the rate at which we process information slows down. Our ability to concentrate attention on a task for prolonged periods decreases.

A few more drinks can impair one's ability to perform tasks that normally require little thought or skill. Now the drinker has to concentrate just to avoid dropping things, to follow conversations, and to change music on the stereo. Simply moving about in a crowd of people at a party without spilling a drink

EFFECTS OF INCREASING AMOUNTS OF ALCOHOL ON THE BEHAVIOUR OF A 73-KG (160-LB.) MALE



* One drink = 43 mL (1.5 oz.) liquor, 341 mL (12 oz.) beer, 142 mL (5 oz.) wine

Adapted from "Alcohol — Do you know enough about it?" (Addiction Research Foundation of Ontario)

or bumping into someone will require all one's remaining ability.

If a drinker were to consume even more alcohol, then BAC would continue to rise and the effects of alcohol on behaviour would become even more obvious. A lack of muscular coordination could no longer be hidden. The drinker would begin to slur words, lose balance, and generally react more slowly. Emotional outbursts might express feelings of sadness or hostility.

Beyond this stage, the drinker risks falling into a stupor and eventual coma. If the coma persists untreated for more than 10 hours, a person usually dies of asphyxiation due to paralysis of the respiratory centre of the brain. Fatal alcohol poisoning usually occurs at BACs above 400 mg%. Deaths due only to alcohol ingestion, however, can occur at BACs around 250 mg%.

When drinking, people experience a sense of well-being, which they often attribute to their own finer qualities. Obviously, this is one reason why drinking is so popular. The drunk leaning up against the bar no doubt still feels articulate, intelligent, a great pal and a fantastic lover. A sober friend, however, hears the slurring of speech and the nonsensical talk. This drinker has had too many to drive home.

How Alcohol Affects Driving

Driving a car safely means getting a complicated piece of machinery from point A to point B, without crashing. The driving task taps almost all our basic skills — perception, attention, judgment, decision-making, physical reactions — and our ability to *coordinate* these skills. Because alcohol influences each of these skills, it has many adverse effects on driving.

Perhaps the most important skill for driving is the simple ability to see or perceive. Even before hitting the road, the impaired driver may have trouble getting out from between parked cars. Our ability to judge distances between stationary objects is reduced at BACs over 80 mg%. This ability can be impaired at BACs between 50 mg% and 80 mg%.

Once on the road, the ability to estimate distances between moving objects is also reduced. Some people are affected this way if their BAC is as low as 20 mg%. Virtually everyone's vision is affected at BACs of 100 mg%.

Driving at night involves additional problems, especially for older drivers who don't see as well in the dark as they used to. The ability to adjust to sudden darkness, called *dark adaptation*, is impaired at BACs of 80 mg% and higher. The greater the concentration of alcohol in blood, the longer the glare recovery time. This refers to the period during which a person is partially blinded when exposed briefly to bright lights and then to darkness. This happens each time the headlights of an oncoming vehicle pass you.

When driving, we usually make a conscious effort to scan the road for signs, traffic and pedestrians. Impaired drivers tend to make fewer visual scans of the environment. They are also more likely to look at one thing, such as the lane markers or a traffic sign, for longer periods of time. Consequently, their speed of scanning the total environment is much slower.

Alcohol also affects the small rapid movements of one's eyes — called *saccadic movement* — over which we have no voluntary control. These movements make it possible to identify the presence of objects on the periphery of the visual

field. Alcohol reduces the saccadic movement.

Alcohol impairment also includes tunnel vision, a narrowing of the visual field. As a result, impaired drivers actually see less on either side and pay less attention than they should to what they see. The danger is obvious: hazards and hazardous situations go undetected. An impaired driver may not notice a pedestrian stepping off a curb and may fail to see a car approaching an intersection.

Alcohol also affects other skills critical for safe driving. In simulated driving tests, drivers with BACs of about 90 mg% steered and braked more slowly and used the brake pedal more roughly. Some drivers with BACs as low as 42 mg% (well below the legal limit) performed emergency braking and evasive manoeuvres with less skill than non-drinking drivers.

As a depressant, alcohol affects our ability to make correct decisions at the right time. Under normal conditions, we continually make decisions to correct steering and change speed — usually automatically. The impairing effects of alcohol, however, can make these simple decisions very difficult. The impaired driver often takes too long to make these decisions or, just as risky, makes the wrong decision altogether — both of which can have tragic outcomes. Alcohol can reduce the abilities of an experienced driver to the same level as that of a beginner.

When we drive, we have to do several things at the same time: keep an eye on the road; watch out for dangerous situations; keep our vehicle in the proper lane; and maintain a constant speed. Alcohol affects our ability to coordinate all these actions.

To demonstrate this to yourself, try counting backwards from 99 at the same time as you sort playing cards into the four suits. You can't do both tasks simultaneously as well as you can do each separately. This shows that, *even when you haven't been drinking*, there is a limit to how much you can do at once. The effects of alcohol can drastically reduce this limit.

Alcohol also affects judgment and can increase our willingness to take risks. The effects of alcohol may not noticeably impair our basic ability to drive, but how we feel after drinking can lead us to drive dangerously. After drinking too much, we start to drive like other people we often complain about on the roads:

We forget to put the headlights on or to dim them for oncoming cars.

We change speed more often and make frequent lane changes.

We overshoot stop signs and ignore yellow lights at intersections.

We drift onto shoulders or straddle the centre line as we change stations on the radio.

We pay less and less attention to the driving environment.

We are less able to anticipate dangers ahead.

Taking the easy way, we attend to one task and thus make more errors in another. We can try as hard as we like not to make these errors, but we'll fail: our brains and nervous systems are under the influence of alcohol.



IS IT WORTH THE RISK?

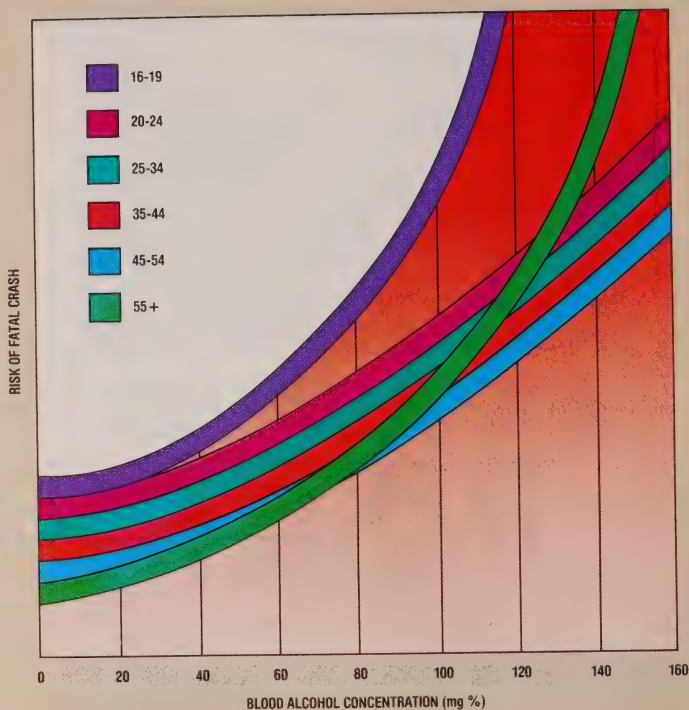
The more you drink
the better your chances . . .
of crashing.

When we drive, we usually allow a margin of error in case of unexpected events — such as a car stopping suddenly, or a child darting into the road. If we drink too much and then drive, we reduce that margin of error and increase our chance of being involved in a road crash. The more we drink, the greater the risk we face.

The facts are very clear. It has been shown again and again that increases in BAC are associated with an increase in the chance of being killed in a road crash.

This is illustrated on page 22. The curve shows the risk of being killed for drivers with different blood alcohol concentrations. Risk is measured on the vertical axis and BAC on the horizontal axis. Moving from left to right, as BAC increases, the curve begins to rise — risk increases. Even drivers with BACs of 50-79 mg% are more likely to be involved in a fatal crash than the average nondrinking driver. At BACs of 80-99 mg%, the risk is 10 times greater. And at BACs of 150 mg%, it is an astounding 154 times greater! Driving

RISK OF FATAL CRASH BY AGE AND BAC LEVEL



Ref: Mayhew et al. Youth, Alcohol and Relative Risk of Crash Involvement: TIRF 1986

after drinking is indeed a risky business.

The risk of being killed varies with the age of the driver and is particularly significant for young drivers. The graph shows that the risk for drinking drivers between the ages of 16 to 19 is greater than those of other age groups. So, while the chances of drivers being killed are greater if they have been drinking, the risk is even higher for young people.

Let's take a few examples. If you are 35 years old and are driving with a BAC of 80-99 mg%, your chances of being killed are four times greater than when

you are sober. But, if you are 19 years old and are driving with the same BAC (80-99 mg%), your chances of being killed are 44 times greater than when sober. Young people are at greater risk at all BACs. But, all drinking drivers risk a fatal accident.

Nothing can be worth the risk of killing yourself or someone else. If you are a young driver, or if you are just learning to drive, you might want to consider separating driving from drinking completely. You couldn't make a better or wiser choice.



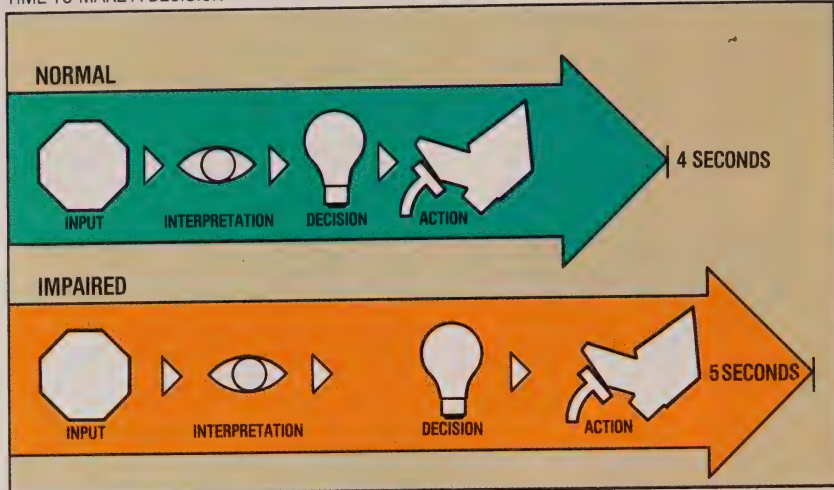
TRIPLE THREAT TROUBLE

Drinks, drugs and
driving

While alcohol is the most widely used drug and the one most often linked to motor vehicle accidents, other drugs can also interfere with our ability to drive. Obviously, illegal drugs used to get "high" — like marijuana — have adverse effects. But so do some medicines obtained by prescription or "over the counter" in drug stores. Many drugs used to treat medical conditions have little or no effect on driving when used by themselves and in recommended doses. With some drugs, however, the greatest danger occurs when they are used in combination with alcohol. The combined effects of alcohol and another drug can be much greater than the effect of either one taken alone.

Because alcohol acts like a depressant, adding alcohol to other drugs with depressant effects can cause serious problems. For example, drinking after using a tranquilizer is one of the most hazardous mixtures for drivers. Sleeping pills can increase the impairing effects of alcohol even if drinks are consumed 10 hours after the drug was taken. Taken

TIME TO MAKE A DECISION



with alcohol, sedatives can also cause sudden mood changes or emotional outbursts. Angry, reckless driving can result.

Some drugs have depressant "side effects" along with their main medical effect. Drugs in this category include cough medicines, cold remedies, drugs to prevent nausea or motion sickness, and antihistamines to control symptoms of allergy. Even taken alone — but especially when combined with alcohol — these kinds of drugs can cause drowsiness, slower reaction times, and decreased attention and coordination. Often their effects are subtle and can go unrecognized — until it's too late.

Because depressants add to the effects of alcohol, one might assume that stimulants can reduce or eliminate impairment due to alcohol. Unfortunately for those of us who drink, only the passage of time and the metabolism of alcohol can do that. Stimulants such as caffeine,

which is found in coffee, tea and some soft drinks, cannot restore our ability to drive safely. The use of stimulants to overcome fatigue on long drives or during night trips can also lead to disaster. Stimulant effects can wear off suddenly, leaving us fast asleep and our vehicles out of control.

Besides alcohol, there are thousands of other drugs. These drugs can affect some people more than they do others. Even for the same person at different times, a drug can produce greater or lesser effects. The combined effects of alcohol and other drugs are also unpredictable.

Ask your doctor or pharmacist for advice on whether you should drive after taking a prescribed or "over-the-counter" drug. Also ask whether or not even a small amount of alcohol could greatly increase the drug's effect on driving ability. When in doubt, avoid alcohol when taking medication.

ARE YOU CONCERNED?

Many of us are concerned about alcohol-impaired driving. Today, as never before, there are many kinds of programs designed to deal with this social problem. Some programs encourage drivers to drink very little or, at most, moderately. Others aim to separate driving and drinking completely, as in "If you drive, don't drink! If you drink, don't drive!" Still other programs reduce as much as possible the damage caused by alcohol-impaired driving — for example, emergency medical services.

Society's response to alcohol-impaired driving includes legal, health, educational and technological approaches, as well as programs that combine these. The *legal approach* uses the threat of arrest and punishment to discourage people from driving after drinking too much. This has been the cornerstone of society's response to the

problem. Police stop-checks for impaired drivers are only one example of the legal approach. The *health approach* includes treatment and rehabilitation for persons convicted of alcohol-impaired driving and identified as being alcoholic or problem drinkers. The *educational approach* includes driver education in schools; courses for persons convicted of alcohol-impaired driving; as well as information and awareness campaigns through radio, television, newspapers and magazines. *Technological approaches* have also been used to help detect and arrest impaired drivers. One example is breath testing equipment to measure BAC.

Because drinking-driving problems are complex and difficult to solve, we need many different programs. No one law or program can prevent traffic crashes caused by impaired drivers.



CRIME AND PUNISHMENT

Canada's criminal laws
regarding impaired driving offences
are tough but fair.

Driving after you have been drinking is dangerous. Each year, impaired driving causes tens of thousands of accidents that result in injuries and deaths. It should surprise no one that impaired driving is a *criminal* offence. Canada's laws are strict and punishment can be severe. The laws on impaired driving also apply to boating and flying.

To understand exactly how the law works, imagine yourself at a party. You've had a lot to drink but you decide to drive home anyway. You are an impaired driver. By breaking the law, you not only risk accident and injury to yourself and others — but you also risk arrest and punishment.

Nevertheless, you may think you're okay to drive. Even if you feel impaired, you still don't believe you will be caught. After all, you do the best you can to drive straight and slow. Next, the unbelievable happens. You finally notice flashing lights in the rearview mirror. Or you find yourself stopped in a random check by police armed with roadside breath-testers.

The police officer who stopped you detects the obvious smell of alcoholic beverages. There is every reason to suspect you have been drinking. The police officer demands that you give a breath sample. Without a reasonable excuse, it would be a crime to refuse the officer's request for a breath sample. You blow.

If you are unable to provide a breath sample for health reasons, or because you are unconscious, a police officer may request a qualified medical practitioner to take a blood sample which can be analyzed to determine your blood alcohol level.

The light on the screening device blinks red; you failed. Your BAC is over the legal limit of 80 mg%.

The police officer now has reasonable and probable grounds for believing you have committed the crime of impaired driving. You must now accompany the officer to the police station where additional breath samples will be demanded. Again, it is a crime to refuse, without reasonable excuse, to give these samples.

You blow into the Breathalyzer and your reading is 120 mg%. You are charged under Section 237 of the Criminal Code of Canada with the crime of operating a motor vehicle with a BAC greater than 80 mg%. Next, the police photograph and fingerprint you. You may think you are being treated like a criminal. You are.

Now imagine you stand before a judge. You have been convicted. The judgement is stiff even though it's your



It doesn't matter if the vehicle is on the street or a parking lot. It doesn't even have to be moving. You can still be charged with committing a crime if you are impaired and behind the wheel, even if you haven't started to drive.

first offence ever. You are sentenced to pay a fine of \$500 and the judge prohibits you from driving for one year. Under provincial laws, your driver's licence will be automatically suspended, or

IT IS A CRIME:

- ☐ to drive a motor vehicle, to navigate a vessel or to fly an aircraft when impaired by alcohol or a drug.
- ☐ to operate a motor vehicle, vessel or aircraft with a BAC over 80 mg%.
- ☐ to have care or control of a motor vehicle, vessel or aircraft while impaired or with a BAC over 80 mg%.
- ☐ to fail or refuse, without reasonable excuse, to give a breath or blood sample upon demand by a peace officer.

It is also a crime:

- ☐ to fail to stop when involved in an accident, to give name and address, and to offer assistance as required.
- ☐ to drive during the time one's licence is suspended for an impaired driving conviction or when ordered not to by a judge.

Impaired driving can also lead to even more serious charges:

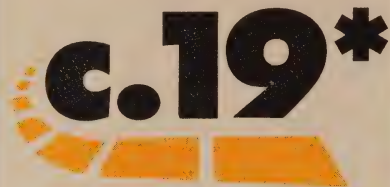
- ☐ manslaughter
- ☐ criminal negligence causing death
- ☐ criminal negligence causing bodily harm
- ☐ dangerous operation of a motor vehicle, vessel or aircraft
- ☐ dangerous operation of a motor vehicle, vessel or aircraft causing bodily harm and/or death



Breathalyzer (above), roadside screening device (left).

even cancelled. And you may still owe your lawyer a lot of money.

The fact that you now have a crimi-



The changes made to federal impaired driving laws in 1985 have set a new minimum standard for Canada.

Minimum fines are now higher. Driving prohibitions have been added. Two brand new offences specifically prohibit impaired or dangerous driving that causes death or injury. And in cases where a breath sample is impossible, police may now ask that blood samples be taken to test the amount of alcohol in the blood.

Also new, the impaired driving offence now applies to *all* motorized vehicles, including boats and planes.

For more information on the new minimum and maximum penalties, write:

Department of Justice Canada
Communications and Public
Affairs
239 Wellington Street
Ottawa, Ontario
K1A 0H8

nal record may present major problems for you in the future. Getting insurance — if it is available to you at all — may mean paying two or three times what you used to pay. If you drove for a living, getting bonded may be impossible.

It could have been worse for you. Each year thousands of impaired drivers cause accidents that injure and kill others. For these people, the laws are really tough. *Impaired driving causing bodily harm* is an offence punishable by up to 10 years in prison and up to a 10-year prohibition from driving. A conviction for *impaired driving causing death* means up to 14 years in prison and up to a 10-year prohibition from driving. For even more serious offences, such as *manslaughter or criminal negligence causing death*, the maximum penalties are life in prison and a lifetime prohibition from driving.

The law also recognizes that you can be impaired at levels lower than 80 mg%. Factors such as fatigue, drinking experience, drugs and emotional state can interact with alcohol and result in impairment long before your BAC reaches 80 mg%. Conviction for driving while impaired carries the same penalties as driving with a BAC over 80 mg%. Provincial laws also take this into account. In some provinces, drivers' licences can be suspended for up to 24 hours if BACs between 50 and 80 mg% are detected by roadside breathtesting devices.

One purpose of Canada's impaired driving laws is to punish offenders. Another purpose is to prevent people impaired by alcohol or drugs from driving. Before you decide to drive after drinking, remember these laws. The penalties for a wrong decision could be worse than you can imagine.

PENALTIES

FOR IMPAIRED DRIVING OFFENCES

The *minimum* penalties for impaired-driving offences are:

First conviction	a \$300 fine and a prohibition from driving for three months.
Second conviction	14 days in jail and a prohibition from driving for six months.
Third or later convictions	90 days in jail and a prohibition from driving for one year.

The *maximum* penalties are:

For impaired driving, boating or flying; for operating a motor vehicle, vessel or aircraft with a BAC over 80 mg%; for refusing to give a breath or blood sample; for having care or control while impaired or with a BAC over 80 mg%.	Five years in prison and a prohibition from driving for three years.
For dangerous operation of a motor vehicle, vessel or aircraft.	Five years in prison and a prohibition from driving for three years.
For impaired driving, boating or flying causing bodily harm; for dangerous operation causing bodily harm; for criminal negligence causing bodily harm.	10 years in prison and a prohibition from driving for 10 years.
For impaired driving, boating or flying causing death; for dangerous operation causing death.	14 years in prison and a prohibition from driving for 10 years.
For manslaughter and for criminal negligence causing death.	Life in prison and a lifetime prohibition from driving.

GUESS WHAT IT MEANS TO BE **SMASHED?**

Here's a quiz that will test your
knowledge and understanding of the issues
covered in this magazine.





After drinking a 341 mL (12 oz) bottle of beer, 43 mL (1½ ozs) of liquor, or a 142 mL (5 oz) glass of wine, the amount of alcohol in your bloodstream, following complete absorption, will be the same.

TRUE ☐ FALSE ☐

Answer: *True*. Each of these alcoholic beverages contains equal amounts of alcohol. If you plan on drinking, don't drive or arrange for someone sober to drive you.



Food slows down the rate at which alcohol is absorbed into the blood-stream.

TRUE ☐ FALSE ☐

Answer: *True*. Food eaten either shortly before or while drinking will slow down the rate at which alcohol enters the bloodstream. Ultimately, however, all the alcohol you drink will be absorbed into the blood. This could occur as you are getting into your car.



The amount of alcohol in your blood is influenced by the rate at which you drink.

TRUE ☐ FALSE ☐

Answer: *True*. The more drinks you have over a shorter period of time, the faster alcohol will accumulate in your blood. On the other hand, the slower you drink, the lower your blood alcohol concentration will be because your body is gradually eliminating the alcohol at the same time you are consuming it.



You can be charged with a drinking-driving offence if your BAC is less than 80 mg%.

TRUE ☐ FALSE ☐

Answer: *True*. Section 237 of the Criminal Code of Canada states that you can be charged with a criminal offence for driving while impaired by alcohol or drugs even at levels lower than 80 mg%.





Drinking drivers of all ages are more likely to be killed in traffic accidents than sober drivers.

TRUE ☐ FALSE ☐

Answer: *True*. The risk of being killed in a traffic accident becomes greater with increases in BAC. While all drinking drivers are at greater risk than nondrinking drivers, the risk is particularly high for teenage drinking drivers.



Once you're drunk, the only remedy is the passage of time.

TRUE ☐ FALSE ☐

Answer: *True*. Time is the only cure. Black coffee, cold showers, strenuous exercises and other popular remedies do not work because they cannot increase the rate at which your body disposes of the alcohol. At worst, they give you a false sense of alertness.



A mixture of a tranquilizer and alcohol is one of the most hazardous combinations known for impairing driving ability?

TRUE ☐ FALSE ☐

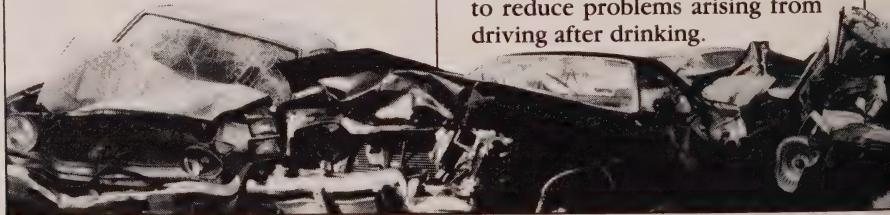
Answer: *True*. Tranquilizers can increase the impairing effects of alcohol as well as cause sudden mood changes or emotional outbursts. These and other drugs when combined with alcohol can interfere with your ability to drive safely.



There are many positive steps that I can take to reduce the problem of driving after drinking too much?

TRUE ☐ FALSE ☐

Answer: *True*. There are many positive things that you can do. A few of these are listed in the next section. Remember, our individual contributions add up and will help to reduce problems arising from driving after drinking.





The worst way to tell if someone has had too much to drink is to ask them.

TRUE ☐ FALSE ☐

Answer: *True*. This is probably the most unreliable way to tell. A person's judgement is seriously affected by alcohol and they usually overestimate their abilities.



You can be charged with impaired driving even if you are not driving your car on public roads.

TRUE ☐ FALSE ☐

Answer: *True*, for several reasons. First, you can be charged even if you are parked — you need only have care or control of the vehicle. Second, all modes of transportation are covered — not just cars, but trucks, vans, motorcycles, all-terrain vehicles and snowmobiles. Third, because all modes of travel are covered, including boats and planes, you need not be on a road to be charged.

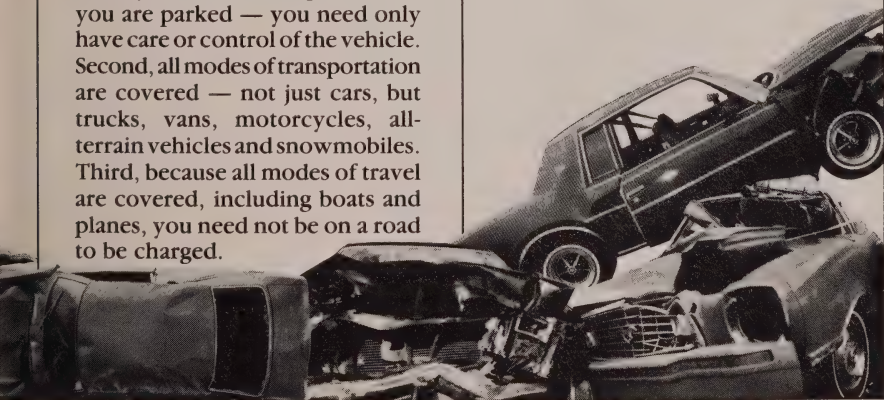


You arrive at a friend's house for dinner at seven o'clock and have two drinks of liquor before eating at eight. During the meal you have three glasses of wine. At 10:30, the phone rings and you are advised that you must go home immediately. You are quite capable of driving home safely.

TRUE ☐ FALSE ☐

Answer: The BAC charts will help you determine the truth of this statement. The ultimate decision is up to you. If you checked "true" for all the rest of the statements above, you know enough to make the right decision. It's up to you.

Is driving after drinking really worth it? Only you can answer this question.







TAKING CHARGE

Each of us can make
a difference
in preventing
impaired driving.

The problem of alcohol-impaired driving is big and complex. Although many programs are now in place to deal with it, the number of motor vehicle accidents due to impaired driving remains too high — more than 20 000 of these crashes cause injury or death each year. It may seem as if there is little that we as individuals can do to prevent impaired driving. Nothing could be further from the truth.

In fact, unless each of us becomes involved and takes action wherever and whenever possible, the damage done by impaired driving will continue. The small, positive steps each of us takes will add up to large gains in preventing this major social problem. The challenge is this: to change the way we as a society combine driving and drinking.

As individuals, we can take up the challenge, step out and get active. If we already do not drive after drinking, or if we refuse to ride with someone who has drunk too much to drive, our examples will help set a new standard. As more and more people start to follow

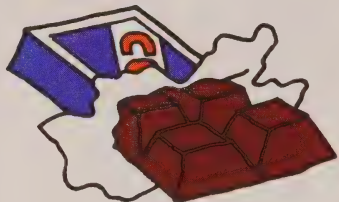
SMASHED



our example, driving after drinking too much will simply become *unacceptable*.

You can't ignore the very real pressure to drink excessively at some par-

ties or social events. If you drink socially, try some of the following ways to avoid impaired driving for yourself.



Eat a light meal or some chocolate before going to a party — food slows down the absorption of alcohol and lowers your BAC. Continue to snack as you drink.



Tell a white lie — say you feel tired or you are on medication and you can't drink much.



Between alcoholic drinks, have water or soft drinks. Or mix each drink weaker than normal. Both ways help cut down the amount of alcohol entering your body.



Better yet, after one or two drinks, feel confident when you are offered another drink and say "No thanks, I'm driving." Let heavier drinkers feel pressured by lighter drinkers to cut down!

About 20% (one in five) of the nighttime drivers in Canada have been drinking and 6% (one in 15) are legally impaired.

Alcohol is involved in about 50% (one in two) of fatal crashes, 25% — 30% (three in 10) of accidents involving injury, and 5% — 10% (one in 10) of accidents involving property damage only.

When we host a party, we can also take steps to discourage guests from driving home if they have had too much to drink. Here are some suggestions.

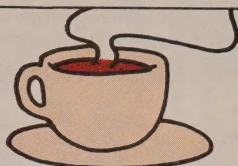


Set up "house rules" that make driving home after drinking too much *not* acceptable. Tell your guests about these rules *before* they arrive! Then they can make alternative plans for going home if they plan to drink.



Offer guests fruit juices, mineral water and soft drinks as alternatives to alcoholic beverages.

And we don't have to stop with just ourselves or family and friends. Those of us who belong to groups or clubs can challenge other members to share a leading role in preventing impaired driving. Many groups and organizations sponsor



Don't serve "one for the road." It's a good idea to close the bar at least one hour before the party ends. Encourage guests to stay for a while by serving food and tea or coffee at this point.



Have enough spare cash on hand to lend to friends for taxi fare.



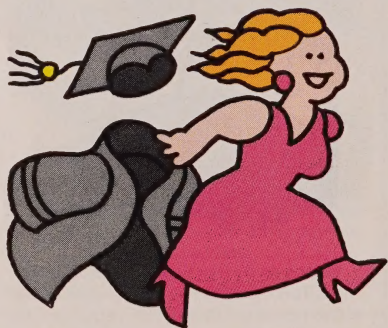
Be prepared to have some guests stay overnight if necessary. A little inconvenience and embarrassment (theirs, not yours) are far better than risking impaired driving.

parties and other social events where alcohol is served. All members can participate in making sure no one has to drive after drinking. People can take turns not drinking and driving others home.

There are many, many other ways for us to prevent impaired driving. Here are some things that people are now doing.



Contract for Life. This is a formal agreement for families or friends, promoted by Students Against Driving Drunk (SADD). For example, youth and parents work together so that no member of the family ever has to drive after drinking. If you are a young driver or a parent, you can do likewise for your family.




Safe Grad. This program, which was started by students, promotes alternatives to drinking alcohol at celebration times and provides safe rides home. As a parent or a student, you can help organize your school's graduation party and spread this practice.



Bartender Awareness. Some programs now offer guidance to those who serve alcoholic beverages professionally. These programs are also available to those of us who host parties or serve drinks to guests. By participating in such programs we can better understand the effects of alcohol and learn to recognize signs of impairment. We also learn how to handle guests who have had too much to drink.

These are only some of the ways each of us can prevent impaired driving. Remember, every small step, each positive action makes a difference!

All together, we can have a tremendous impact on drinking-driving problems.



**THE SAFEST
DISTANCE BETWEEN
TWO POINTS
IS A
STRAIGHT LINE**

On the other hand,
if you're drinking and driving . . .



Drink Away.



Drive Away.

